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SLIM-LINE CONNECTORS

TYPICAL SL172F REAR MOUNT RECEPTACLE

HEX NUT
Used in mounting rear or front of panel receptacles (supplied standard).

THREADED BUSHING
Coupler ring on mating plug threads onto bushing and keeps plug/receptacle from working loose.

FEMALE INSERT*
Rugged molded black plastic barrel construction; positively keyed to housing.

FLATTED BARREL
Keys to inside flat on male insert. Polarizes the connection. Correct mating every time.

PIN TERMINALS
Large, rugged plated copper alloy; solder cup type.

CABLE CLAMP
Extra large and rugged clamp protects soldered terminations (also facilitates grounding/shielding feature when used on receptacle insert).

CORD PLUG HOUSING
Precision-drawn, plated copper alloy with non-glare matte finish.

STRAIN RELIEF SPRING
Provides positive relief from cable wear at opening in plug housing.

LOCK WASHER
Prevents rear or front of panel receptacle from working loose when installed (supplied standard).

REAR OF PANEL MOUNT RECEPTACLE
Tough, plated diecast housing with non-reflecting matte finish. Mounts in D-shape (self-keyed) hole. Other receptacle types are: Front of Panel Mount and Flange Mount.

FLAT WASHER
Used in mounting rear and front of panel receptacles (supplied standard).

CONTACT TERMINALS
Rugged solder lug type; copper alloy plated

CONTACTS
Held captive in insert. Excellent pin retention force. Copper alloy plated.

MALE INSERT*
Rugged black plastic; keyed to housing. Durable plated copper alloy pins are 100% molded-in.

*NOTE: Insert fits both plug and receptacle housings; can be interchanged at any time.

LATCH SPRING
Captive spring locks insert to housing

COUPLER RING
Held captive on plug; non-reflective matte finish. Threads onto receptacle bushing (or mating plug) to hold connector halves secure from accidental separation.

LATCH DETENT
Latch spring on insert seats in detent to hold insert firmly in housing.

DESIGN FEATURES

Slim-Line® Audio Connectors are a unique series of premium quality connectors featuring interchangeable inserts which allow any plug or receptacle to be male or female. This versatility is valuable in a wide variety of applications: microphones, public address systems, 2-way, CB, ham, and marine radios, audio-visual systems, industrial control and instrumentation, broadcast, security and medical electronics.

APPLICATIONS

Retrofit/Replacement; Slim Line Cord Plug (**SL405M**) and Receptacle (**SL105F**) are recommended as a possible choice to replace Switchcraft/DIN plug (**12CL5M**) and receptacle (**55HA5F**). Receptacle **SL105F** fits the same mounting holes as the Switchcraft/DIN receptacle.

Four pin/contact Slim-Line plugs and receptacles are recommended as direct replacements for the original Slim-Line connectors, Series **2504**, and for the molded version of the Slim-Line connector, **Style ST34**.

RECEPTACLES

Three types of receptacles can be specified:

1. Flange mount (Series SL10)
2. Rear of panel mount (Series SL17)

Receptacles can be specified with same male and female insert combinations as cord plugs. For rear and front of panel mounting types, hex nuts, lock washers, and flat washers are supplied. For flange mount receptacles, mounting holes in flange accept #4 machine screw or .125" (3.18 mm) diameter rivet.

CORD PLUGS

Miniature Cord Plugs feature nickel-plated copper alloy housings with matte finish on exterior parts. Plugs may be specified with inserts having 2-, 3-, 4- and 5-pins (male) or contacts (female), or 2-, 3-, or 4-contact receptacles having shunts (N.C.) on two contacts (special order only). Extra large cable clamp protects against pulling and twisting strains on terminations. Strain relief spring protects against excess cable wear at entry point at rear of housing. Cord plugs accept cables up to .281" (7.14 mm) diameter. Captive coupler ring feature (**Series SL40**) provides secure mechanical connection and protection against shock and vibration between cord plugs and mating plug (**Series SL41**) or receptacle.

DIMENSIONS ARE FOR REFERENCE ONLY Inch
(mm)

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SLIM-LINE CONNECTORS (continued)

INSERTS

Inserts are molded of high-strength plastic, and are completely interchangeable between plug and receptacle housings at any time. Inserts are keyed to housings, and male and female inserts are polarized to prevent mismatching.

PIN/CONTACT CONFIGURATIONS:

Pins	Contacts	Contacts (Shunts)
2	2	2 (N.C. Shunt on each contact)
3	3	3 (N.C. Shunts on contacts 1 and 3)
4	4	4 (N.C. Shunts on contacts 1 and 4)
5	5	—

◇Add an "S" to end of part number for shunts. Special order only.

Insert is installed from front, and the captive latch spring locks insert to housing. To remove insert from receptacle, depress latch spring and apply pressure to rear of insert (**DO NOT APPLY PRESSURE TO TERMINALS**). On cord plugs, depress latch spring and press in on strain relief to free the insert.

GROUNDING/SHIELDING

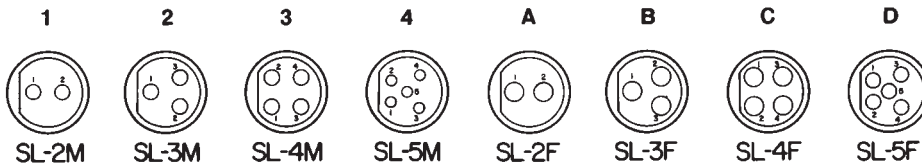
Housings shield internal connections and provide ground (common) connections without using a pin/contact. On cord plugs, ground lead (or shield) is connected to cable clamp. For receptacles Cable Clamp, **SL04** is ordered separately as a special and installed. If desired, ground/shield connection may then be made to clamp. When mated, a continuous, shielded, low resistance path is made through the connector.

Part Number	Item
◇SL01	Hex Nut
◇SL02	Lockwasher
◇SL03	Flat Washer
◇SL04	Cable Clamp
◇SL05	Strain Relief Spring

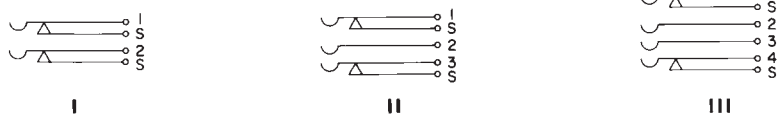
SLIM-LINE CONNECTOR PART NUMBERING SYSTEM

SERIES	HOUSING TYPE	Number of Contacts	Gender	Options
SL SLIM-LINE	— NONE	2	M MALE	S WITH SHUNTS
	10 RECEPTACLE, FLANGE MOUNT	3	F FEMALE	
	17 RECEPTACLE, REAR MOUNT	4		
	18 RECEPTACLE, FRONT MOUNT	5		
	40 CORD PLUG WITH COUPLING RING			
	41 CORD PLUG WITHOUT COUPLING RING			

PIN AND CONTACT ARRANGEMENTS



SCHEMATIC CIRCUITS



DIMENSIONS ARE FOR REFERENCE ONLY $\frac{\text{Inch}}{(\text{mm})}$

SPECIFICATIONS

MATERIALS

Receptacle Housings: Die-cast zinc, nickel-plated.

Cord Plug Housings: Copper alloy, nickel-plated.

Inserts: Glass-reinforced thermoplastic. UL 94 V-0.

Female Contacts: Copper alloy, silver-plated, solder lug type.

Pins: Copper alloy, silver-plated, solder cup type.

Cable Clamp, Strain Relief, and Mounting Hardware: Steel, plated. **Latch:** Steel, plated.

ELECTRICAL

Current Rating: 5 Amps carry only.

MOUNTING

Cord Plugs: Plugs accept cables up to .281" (7.14 mm) diameter.

Receptacles: Flange mount type mounts in panels or chassis up to .188" (4.78 mm) thick. .125" (3.18 mm) diameter holes accept #4 machine screws or .125" (3.18 mm) diameter rivets. Rear and front of panel types mount in "D"-shaped hole in panels or chassis up to .219" (5.56 mm) thick. Hex nut (**SL01**), lockwasher (**SL02**), and flat washer (**SL03**) are supplied for mounting.

CABLE CLAMP AND STRAIN RELIEF

Cord Plugs: Plugs are supplied with rugged cable clamps and strain relief springs. Cable clamp serves two valuable functions: to firmly hold cable to prevent pulling or twisting strains on soldered terminations, and as a connecting point for ground (common) or shield when grounding/shielding through the connector is required.

Receptacles: Receptacles are not supplied standard with cable clamp for strain relief. If grounding/shielding feature is desired, separate Cable Clamp, **SL04**, is installed on receptacle insert.

MOUNTING HARDWARE

(Supplied with Series SL17 and SL18 receptacles)

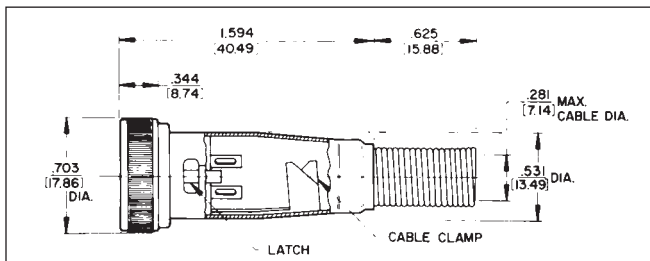
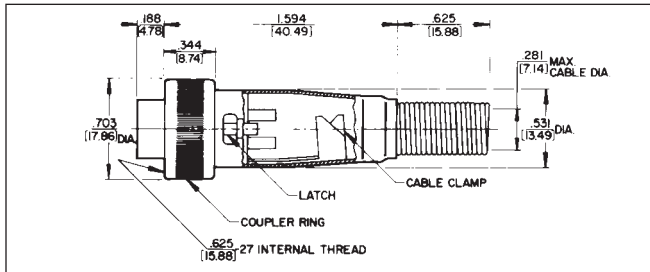
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SLIM-LINE CONNECTORS (continued)

SL40 CORD PLUG with Coupler Ring



SL402M (typical)

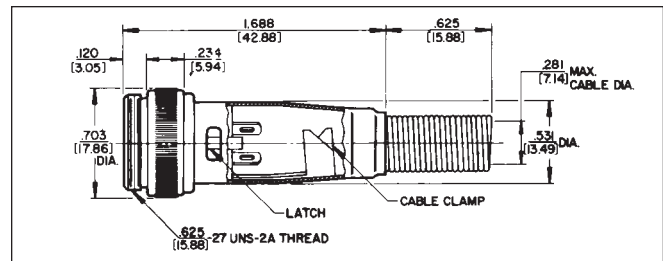
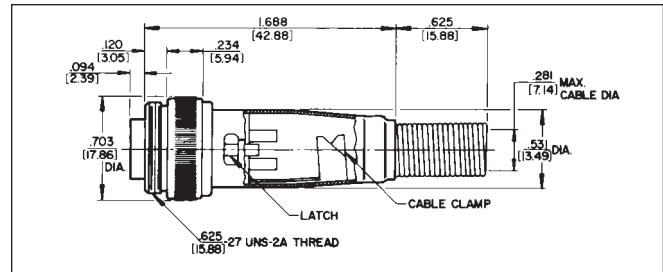


Non-reflective metal shell; coupling ring; 2 through 5 pins (male) or 2 through 5 contacts (female). Also 2-, 3- and 4-contact inserts with two shunted (N.C.) contacts. Efficient cable clamp and strain relief.

SL41 CORD PLUG without Coupler Ring



SL413F (typical)



Non-reflective metal shell; 2 through 5 pins (male) or 2 through 5 contacts (female). Also 2-, 3- and 4-contact inserts with two shunted (N.C.) contacts. Efficient cable clamp and strain relief.

SL MALE CORD PLUGS

Part Number	Pins	Pin Arrangements
SL402M	2	1
SL403M	3	2
SL404M	4	3
SL405M	5	4

SL MALE CORD PLUGS

Part Number	Pins	Pin Arrangements
SL413M	3	2
SL414M	4	3
SL415M	5	4

SL FEMALE CORD PLUGS

Part Number	Contact	Contact Arrangements
SL402F	2	A
SL403F	3	B
SL404F	4	C
SL405F	5	D

SL FEMALE CORD PLUGS

Part Number	Contacts	Contact Arrangements
SL412F	2	A
SL413F	3	B
SL414F	4	C
SL415F	5	D

STRAIN RELIEF SPRING

Strain Relief Spring
Part Number SL05



◇ Available on special order only; contact Switchcraft for price and delivery.

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(mm)

Switchcraft® CONNECTORS & RECEPTACLES

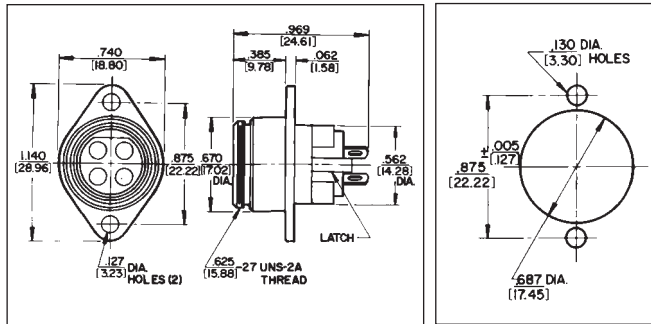
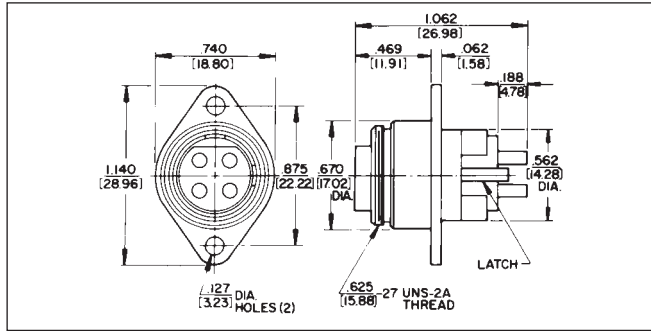
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SLIM-LINE CONNECTORS (continued)

SL10 RECEPTACLES
Flange Mount



SL104F (typical)



Flange mounted; 2 through 5 pins (male) or 2 through 5 contacts (female). Also 2-, 3- and 4-contact inserts with 2 shunted (N.C.) contacts.

SL MALE RECEPTACLES

Part Number	Pins	Pin Arrangements
SL102M	2	1
SL103M	3	2
SL104M	4	3
SL105M	5	4

SL FEMALE RECEPTACLES

Part Number	Contacts	Contact Arrangements
SL102F	2	A
SL103F	3	B
SL104F	4	C
SL105F	5	D

SL17 RECEPTACLES
Rear of Panel Mount



SL175F (typical)



SL17 and SL18 Receptacles
Non-turn panel cut-out



Rear of panel mount; 2 through 5 pins (male) or 2 through 5 contacts (female). Also 2-, 3- and 4-contact inserts with 2 shunted (N.C.) contacts. Mounting locknut (Part Number SL01), lock washer (Part Number SL02), and flat washer (Part Number SL03) supplied.

SL MALE RECEPTACLES

Part Number	Pins	Pin Arrangements
SL173M	3	2
SL174M	4	3
SL175M	5	4

SL FEMALE RECEPTACLES

Part Number	Contacts	Contact Arrangements
SL172F	2	A
SL173F	3	B
SL174F	4	C
SL175F	5	D

◇ Available on special order only; contact Switchcraft for price and delivery.

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SLIM-LINE CONNECTORS (continued)

SL18 RECEPTACLES
Front of Panel Mount

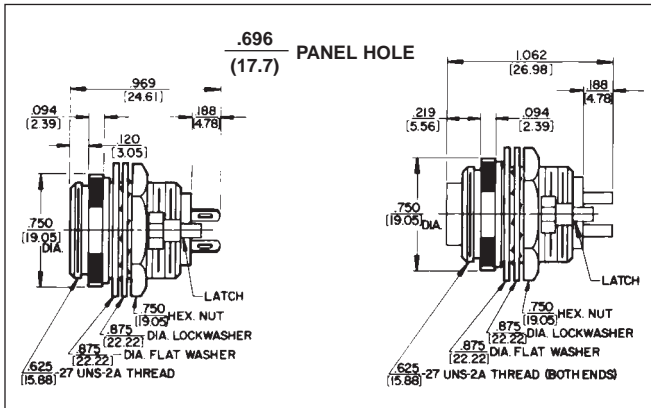


SL183FS (typical)

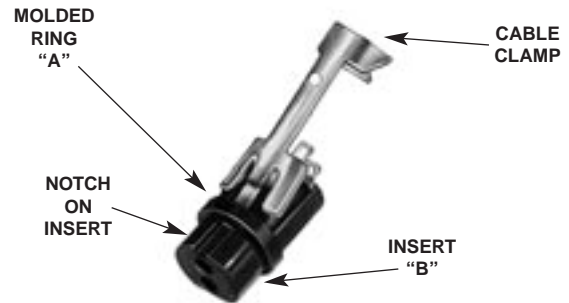
INSTALLING CABLE CLAMP ON INSERT

To install cable clamp on any insert:

1. Position insert approximately as shown in the diagram.
2. Hold clamp at approximately 30° angle (as shown). Place tip of clamp center finger into slot under molded ring "A". Note position of notch on insert in relation to slot.
3. Press center finger forward into slot and reduce angle of clamp until clamp shoulders seat just ahead of molded barrier on rear of insert "B".



Cable Clamp SL04



Front of panel mount; 2 through 5 pins (male) or 2 through 5 contacts (female). Also 2-, 3- and 4-contact insert with 3 shunted (N.C.) contacts. Mounting locknut (Part Number SL01), lockwasher (Part Number SL02), and flat washer (Part Number SL03) supplied.

SL MALE RECEPTACLES

Part Number	Pins	Pin Arrangements
SL182M	2	1
SL183M	3	2
SL184M	4	3
SL185M	5	4

SL FEMALE RECEPTACLES

Part Number	Contacts	Contact Arrangements
SL182F	2	A
SL183F	3	B
SL184F	4	C
SL185F	5	D

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(mm)